



California Energy Commission

GFO-18-301 Pre-Application Workshop

Wildfire: Assessing and Preparing for Risks under Climate Change

Energy Generation Research Office
Energy Research and Development Division
David Stoms
January 25, 2019





Housekeeping

- In case of emergency
- Facilities
- Sign-in sheet
- WebEx recording
- Updates on solicitation documents and today's presentation will be posted at:
<http://www.energy.ca.gov/contracts/epic.html#GFO-18-301>



Agenda

Time	Topic
10:00 am	Welcome <ul style="list-style-type: none">• Commitment to Diversity• EPIC Background and Purpose
10:15 am	Project Requirements
10:30 am	GFO Application Requirements and Key Dates
10:50 am	Questions and Answers
12:00 pm	Adjourn



Commitment to Diversity

The Energy Commission adopted a formal resolution strengthening its commitment to diversity in our funding programs. We continue to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.

To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups throughout the state.
- Notify potential new applicants about the Energy Commission's funding opportunities.
- Assist applicants in understanding how to apply for funding from the Energy Commission's programs.
- Survey participants to measure progress in diversity outreach efforts.



We Want to Hear From You!

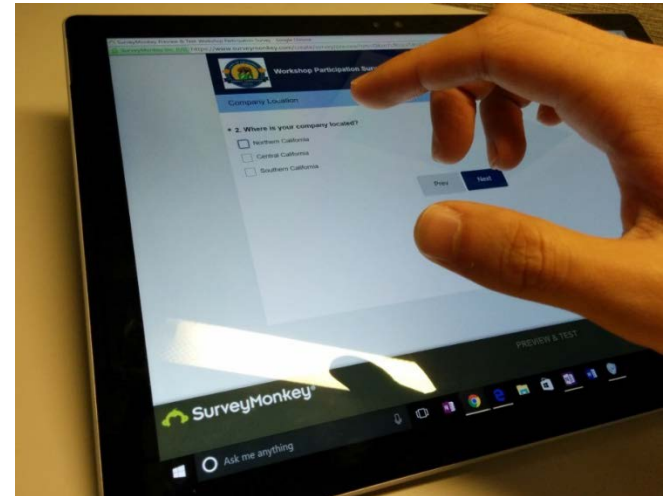
1-Minute Survey

The information supplied will be used for public reporting purposes to display anonymous overall attendance of diverse groups.

In person: iPads are being passed around the room

WebEx: <https://www.surveymonkey.com/r/CEC-1-25-2019>

Thank you for your time!

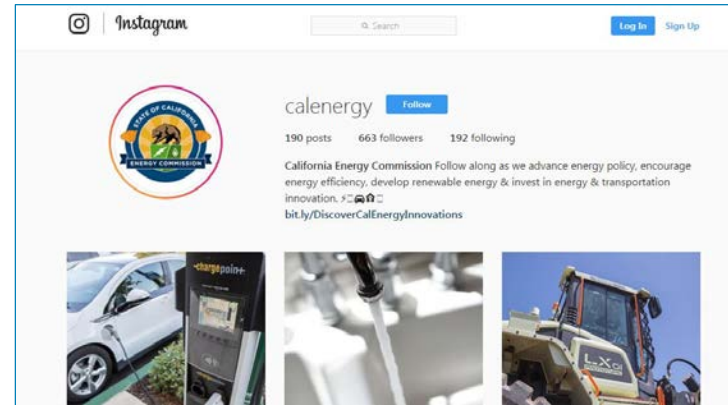




Connect with Us



Twitter



Instagram



LinkedIn



Find Partners Through LinkedIn



The Energy Commission has created a user-driven LinkedIn Networking group page to help potential applicants connect, collaborate, and partner on proposals for research funding opportunities. Participants may subscribe to the “California Energy Commission Networking Hub” by following this link: <http://bit.ly/CalEnergyNetwork>.



LinkedIn Networking Webinars

The LinkedIn Networking webinar is an opportunity for interested applicants to introduce themselves, identify their strengths, and describe what they're seeking from potential project partners. Individuals are encouraged to participate and leverage their connections.

A one-hour, moderated webinar will be held on **February 7 at 2:30 p.m.**

Go to **energy.webex.com** and enter Meeting Number: **923 841 814**

No password is required.

Link to the Subgroup: <https://www.linkedin.com/groups/12185390/>

NOTE:

Energy Commission staff will facilitate introductions.

However, staff involved in development of the solicitation and scoring of proposals will not be present. Staff cannot provide answers to technical questions.

Questions must be submitted to the Contract Agreement Officer.





Background

The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the California Public Utilities Commission (CPUC) in 2011.

The purpose of EPIC is to:

- ▶ Benefit the ratepayers of the three largest electric investor-owned utilities, **Pacific Gas and Electric Co., San Diego Gas and Electric Co., and Southern California Edison.**
 - ▶ Fund clean energy technology projects that promote greater electricity reliability, lower costs, and increased safety.
 - ▶ Encourage technological advancement and breakthroughs to achieve state's statutory energy goals.
-
- Annual program funds total \$162 million with 80 percent administered by the California Energy Commission.



Goals of the GFO

- ▶ Advance wildfire science to support improved grid resilience
- ▶ Incorporate that new knowledge to develop and demonstrate advanced techniques and tools that can improve the assessment of risks to the electric infrastructure from wildfires now and with a changing climate
- ▶ Develop models and analytics that can feed directly into utility management and planning
- ▶ Conduct foundational research in anticipation of California's Fifth Climate Change Assessment



Available Funding

Up to \$5 million is available. There is only one group in this Applied R&D GFO, and the Energy Commission expects to award only one grant.

Available funding	Minimum award amount	Maximum award amount
\$5,000,000 (up to \$4 million for Phase I and up to an additional \$1 million for Phase II)	\$4,000,000	\$5,000,000

Relationship of Research Topics/Phases

Phase I

- 1) Develop new information and knowledge about fire behavior in extreme weather
 - a) Spatial optimization modeling for configuring weather station network
 - b) Physical simulation of burning after tree mortality
 - c) Analysis of historical fire behavior during extreme wind events



- 2) Develop computationally efficient fire spread models and analytics



Run or transfer wildfire spread models and analytics



- 3) Develop long-term wildfire scenario models (Fifth Assessment)



Run long-term wildfire scenario models (Fifth Assessment)

Phase II



Building the Next Generation of Wildfire Risk Models for Grid Resilience

Purpose: To develop the next generation of wildfire models at two or more spatial and temporal scales.

Proposed research in Phase I must:

1. Develop new information and knowledge about fire behavior in extreme weather conditions to inform the next generation of wildfire models.
2. Develop computationally efficient fire spread models in relation to electricity assets. Integrate the latest fire science knowledge into near-term (from real-time out to 7 days in advance) wildfire analytics and risk forecast models of ignited or hypothetical fires.
3. Develop long-term (to mid- and late-century) wildfire scenario models for California's Fifth Climate Change Assessment that incorporate new science to support grid adaptation planning.



1. Advance Wildfire Science

Purpose: Develop new information and knowledge about fire behavior in extreme weather conditions to inform the next generation of wildfire models.

Proposed research must:

- ▶ Develop a process for selecting an optimal configuration of sites for a robust network of meteorological stations across the state that could provide the maximum information about fire risk (especially wind)
- ▶ Develop realistic physical renditions of fuel loads and conditions that would exist in the future with the availability of increased surface load due to tree mortality
- ▶ Improve understanding of the relationship of extreme weather conditions and wildfire to improve the forecasting accuracy about future wildfire risk



2. New Fire Risk Models and Analytics

Purpose: Develop computationally efficient fire spread models in relation to electricity assets

Proposed research must:

- ▶ Integrate the latest fire science knowledge into near-term (from real-time out to 7 days in advance) wildfire analytics and risk forecast models of ignited or hypothetical fires
- ▶ Address the “big data” challenge inherent in the problem, given the terabytes of weather data and the millions of simulations that could be required
- ▶ Test the models and analytics with observational data of past fires
- ▶ Design models and analytics to allow assessment of proposed fuel treatments and identify critical facilities at risk



3. Next Generation Wildfire Scenario Models

Purpose: Develop and evaluate two or more long-term fire scenario projection models (to mid- and late-century) driven by Scripps downscaled climate projections

Proposed research must:

- ▶ Incorporate the latest science on extreme winds, tree mortality, vegetation change, and fire behavior in the wildland-urban interface (WUI) into the models
- ▶ Integrate with land use change modeling
- ▶ Conduct foundational research in anticipation of California's Fifth Climate Change Assessment
- ▶ Investigate how probabilistic weather forecasts 6-9 months in advance could be converted to wildfire risk forecasts and determine whether they would be useful to IOUs and other stakeholders



Phase II Research

Purpose: Support California's Fifth Climate Change Assessment and transfer technology and knowledge to IOUs.

Proposed research must:

- ▶ Run the wildfire scenario models to generate the wildfire scenarios required by California's Fifth Climate Change Assessment
- ▶ Support IOUs and others in adapting models and analytics for operational use
- ▶ Phase II of this grant would only take place if, following a Critical Project Review, the Commission Agreement Manager determines - in writing - that Phase II is needed to support California's Fifth Climate Change Assessment and IOU operations and planning



Eligible Applicants

- ▶ This solicitation is open to all public and private entities and individuals, with the exception of local publicly owned electric utilities
- ▶ Applicants must accept the EPIC grant terms and conditions. <https://www.energy.ca.gov/contracts/pier.html#epicterms>
- ▶ Applicants are required to register with the California Secretary of State at <http://www.sos.ca.gov> and be in good standing to enter into an agreement with the Energy Commission
- ▶ Applicants must propose an interdisciplinary team, including a strong project manager, that has demonstrated the ability to successfully complete similar research projects



Key Dates

Activity	Action Date
✓ Solicitation Release	December 27, 2018
Pre-Application Workshop	January 25, 2019
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>January 28, 2019 5:00 p.m.</u>
Anticipated Distribution of Questions and Answers	Week of February 18, 2019
<u>DEADLINE TO SUBMIT APPLICATIONS</u>	<u>March 13, 2019 5:00 p.m.</u>
Anticipated Notice of Proposed Award Posting Date	April 19, 2019
Anticipated Energy Commission Business Meeting Date	May 8, 2019
Anticipated Agreement Start Date	June 28, 2019
Anticipated Agreement End Date	March 31, 2023



GFO Application Requirements

(for Electronic Submission)

- ▶ **Preferred method** of Delivery is the Energy Commission Grant Solicitation System, available at <https://gss.energy.ca.gov/>
- ▶ First-time users **must** register as a new user to access system.
- ▶ Electronic files must be in MS Word (.doc or .docx) and MS Excel formats
- ▶ Letters of support and commitment as well as attachments requiring **signatures must** be scanned and submitted in PDF format
- ▶ The system will not allow applications to be submitted after the due date and time
- ▶ More detailed information can be found on page **22** of the solicitation manual



Live Demo Tutorial (for *Electronic Submission*)



GSS How to Apply Video.mp4



GFO Application Requirements

(for Hard Copy Submittal)

- ▶ Submit Applications with **all attachments** in the specified order by the due date and time listed in Section III of the manual.
- ▶ Application documents should meet formatting requirements, page limits, and number of copies specified in the table on page **21** of the solicitation manual:
 - ▶ **One** hard copy (**with signatures**) and
 - ▶ **One** electronic copy (on a CD-ROM or USB memory stick)



Application Requirements (continued)

Applicants must complete and include **twelve attachments**:

Att. 1. Application Form (signature!)	Att. 7. Budget Forms
Att. 2. Executive Summary Form	Att. 8. CEQA Compliance Form
Att. 3. Fact Sheet Template	Att. 9. References and Work Product Form
Att. 4. Project Narrative Form	Att. 10. Contact List
Att. 5. Project Team Form	Att. 11. Commitment and Support Letters (signature!)
Att. 6 & 6a . Scope of Work Form and Project Schedule	



Application Form (Attachment 1)

- ▶ Form provides the Energy Commission with basic information about the Applicant and project.
- ▶ Must include all information requested.
- ▶ Must be signed by an authorized representative of the Applicant's organization.
- ▶ Information provided should be consistent with project budget, narrative, and letters of commitment.



Executive Summary (Attachment 2)

- ▶ Executive Summary should summarize the information included in the project narrative.
- ▶ Must include:
 - ▶ A project description
 - ▶ The project goals and objectives to be achieved
 - ▶ An explanation of how the goals and objectives will be achieved, quantified, and measured
 - ▶ A description of the project tasks and overall management of the agreement
- ▶ *Suggested limit: two pages.*



Fact Sheet (Attachment 3)

- ▶ Must present project information in a manner suitable for publication.
- ▶ The fact sheet must follow the template provided and include:
 - ▶ A summary of project specifics
 - ▶ A description of the issue addressed by the project
 - ▶ A project description
 - ▶ Anticipated benefits for the State of California
- ▶ *Suggested limit: two pages*



Project Narrative (Attachment 4)

- ▶ Project Narrative includes the majority of the responses to the Scoring Criteria (Part IV manual)
- ▶ Provide a detailed description of the proposed project and respond to the information requested in each of the following areas:
 1. Technical Merit and Need
 2. Technical Approach
 3. Impacts and Benefits for California IOU Ratepayers
 4. Team Qualifications, Capabilities, and Resources
 5. Budget and Cost Effectiveness
 6. Funds Spent in California
 7. Ratio of Unloaded Labor Rates to Loaded Labor Rates
 8. Match Funding (optional)
 9. Provide sufficient detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria
- ▶ *Suggested limit: 20 pages*



Project Team Form (Attachment 5)

- ▶ Must identify by name all key personnel assigned to the project:
 - ▶ Project Manager
 - ▶ Principal Investigator (if applicable)
 - ▶ Subcontractor receiving at least 25% of Energy Commission funds or \$100,000, whichever is less
- ▶ Clearly describe their individual areas of responsibility.
- ▶ Include a resume (*no more than two pages*)



Scope of Work (Attachment 6, 6a)

- ▶ The **Scope of Work (Att. 6)** identifies the **Tasks** required to complete the project.
 - ▶ Task 1: General Project Tasks are mandatory and cannot be revised.
 - ▶ Task 2: Technical Tasks should be very specific and help scorers to identify what you will deliver to the Energy Commission. Products can be documents, plans and reports.
 - ▶ Equipment and other items that cannot be delivered and stored at the Energy Commission are not "Products".
- ▶ **Project Schedule (Att. 6a)** should provide information about meetings, products and their due dates.
 - ▶ Product titles must match as shown in the Scope of Work (Attachment 6).



Budget (Attachment 7)

- ▶ Every Applicant must complete and include the budget forms for its team:
 - ▶ Category Budget
 - ▶ Direct Labor (Prime Labor Rates)
 - ▶ Fringe Benefits
 - ▶ Travel
 - ▶ Equipment
 - ▶ Materials and Misc.
 - ▶ Subcontractors
 - ▶ Indirect Costs and Profit
- ▶ The Applicant must submit information on all of the attached budget forms, and in the format required.
- ▶ **Don't delete sheets or rows; use the hide/expand function!**



California Environmental Quality Act (CEQA) Compliance Form (Attachment 8)

- ▶ The Energy Commission requires this information to facilitate its environmental evaluation of the proposed project under CEQA.
- ▶ The form will also help applicants determine CEQA compliance obligations by identifying which funded activities may trigger CEQA.
- ▶ All sections of the form **must** be completed.
- ▶ Failure to complete the CEQA process in a timely manner may result in cancellation of the award.



Reference and Work Product (Attachment 9)

- ▶ This form contains two sections:
- ▶ Section 1: **References**
 - ▶ Provide applicant and subcontractor references as instructed.
- ▶ Section 2: **Work Products**
 - ▶ Provide a list of up to three past projects detailing technical and business experience of the applicant or team member (two pages maximum per project).
 - ▶ Include copies of up to three recent relevant publications in scientific or technical journals (if applicable).



Contact List (Attachment 10)

- ▶ Identifies the names and contact information of the project manager, administrator, and accounting officer.
- ▶ Applicant should complete the information in the "Recipient" column shown in blue text.
- ▶ Energy Commission staff will complete the information in the "California Energy Commission" column.



Commitment and Support Letter Form (Attachment 11)

- ▶ A **Commitment Letter** commits an entity or individual to providing the service or funding described in the letter.
- ▶ A **Support Letter** details an entity or individual's support for the project.
- ▶ If the project involves a pilot test or a demonstration site, a commitment letter must be included from the host site.
- ▶ Any project partners that will make other contributions to the project must submit a commitment letter.
- ▶ Any match funding provided must be supported by a match fund commitment letter.
- ▶ **At least one** support letter from a project stakeholder must be included.



Application Evaluation

- ▶ To evaluate applications, the Energy Commission will organize an Evaluation Committee that consists primarily of Energy Commission staff.

- ▶ Application will be evaluated in two stages:
 - ▶ Stage 1 – Application Screening (**Section E, page 31**)
 - ▶ Stage 2 – Application Scoring (**Section F, page 32**)

→ Stage 1 Application Screening (Administrative)

Application Administrative Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation (page 31).
2. Criteria is evaluated on a pass/fail basis.
 - ✓ Applicants must pass all screening criteria or the application will be disqualified.

Some Reasons for Disqualification

- ✓ Application not submitted by the specified due date and time, no signature on the Application Form.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Project completion date is beyond the specified agreement end date.
- ✓ Application does not include at least one support letter.
- ✓ Application contains confidential material.
- ✓ Applicant has not accepted the terms and conditions.

→ Stage 2 Technical Scoring

- Evaluation Committee applies the **scoring scale** to the scoring criteria.
- Applications must obtain a **minimum passing score of 70 points**. In addition, the application must receive a minimum score of **49 points** for criteria **1–4** to be eligible for funding.
- Passing applications will be considered for match funding preference points.
- **Additional points** (up to **10 points**) may be awarded for match funding.

Scoring Criteria (pages 32-28)	Maximum Points
1. Technical Merit and Need	20
2. Technical Approach	20
3. Impacts and Benefits for CA IOU Ratepayers	20
4. Team Qualifications, Capabilities and Resources	10
5. Budget Cost-Effectiveness	10
6. EPIC Funds Spent in CA	15
7. Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	5
Total	100
Minimum points to pass	70



What is the Technical Scoring Scale?

% of Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	Response does not include or fails to address the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
10-30%	Minimally Responsive	Response minimally addresses the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	Response addresses the requirements being scored, but there are one or more omissions, flaws, or defects or the requirements are addressed in such a limited way that it results in a low degree of confidence in the proposed solution.
70%	Adequate	Response adequately addresses the requirements being scored. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	Response fully addresses the requirements being scored with a good degree of confidence in the Applicant's response or proposed solution. No identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	Response fully addresses the requirements being scored with a high degree of confidence in the Applicant's response or proposed solution. Applicant offers one or more enhancing features, methods or approaches exceeding basic expectations.
100%	Exceptional	All requirements are addressed with the highest degree of confidence in the Applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.

How to achieve a high score?

Scoring Criteria	The Question to Answer
Technical Merit and Need	Why should your project be funded?
Technical Approach	How you're going to do what you're going to do?
Impacts and Benefits for CA IOU Ratepayers	How will your project benefit ratepayers?
Team Qualifications, Capabilities and Resources	Who is going to make this project happen, and what resources are available to make it happen?
Budget Cost-Effectiveness	Are you spending money wisely?
EPIC Funds Spent in CA	This is a direct calculation based on budget forms.
Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	This is a direct calculation based on budget forms.



Ranking, Notice of Proposed Award, Agreement Development

Applications that receive a minimum score of 70.00 points for all criteria will be ranked according to their score.

- The Energy Commission will post a **Notice of Proposed Award (NOPA)** that includes: (1) the total proposed funding amount; (2) the rank order of applicants; and (3) the amount of each proposed award. The Energy Commission will post the NOPA at its headquarters in Sacramento and on its website, and will mail it to all parties that submitted an application.
- Proposed awards **must** be approved by the Energy Commission at an Energy Commission Business Meeting.
- Applications recommended for funding will be developed into a grant agreement to be considered at an Energy Commission Business Meeting.
- Recipients may begin the project only **after full execution** of the grant agreement (approval at an Energy Commission business meeting and signature by the Recipient and the Energy Commission).



Debriefings

- ▶ Applicants may request a debriefing after the release of the NOPA by contacting the Commission Agreement Officer listed in Part I. A request for debriefing must be received **no later than 30 calendar days** after the NOPA is released.

- ▶ The Energy Commission reserves the right to:
 - ▶ Allocate any additional funds to passing applications, in rank order.
 - ▶ Negotiate with successful applicants to modify the project scope, schedule, and/or level of funding.

Grounds for Rejection

- ▶ Applications that do not pass the screening stage will be rejected. In addition, the Energy Commission reserves the right to reject an application and/or to cancel an award if any of the circumstances listed on page **31** are discovered at any time during the application or agreement process.
- ▶ Example: The application contains **confidential information** or identifies portion(s) of the application as **confidential**.



Questions and Answers

Please send all questions related to GFO-18-301 to:

Angela Hockaday

Commission Agreement Officer

1516 Ninth Street, MS-18

Sacramento, CA 95814

(916) 654-5186

(916) 654-4423 (fax)

Angela.Hockaday@energy.ca.gov

Deadline to submit questions:

1/28/2019, 5:00 PM PST

Questions?

